

IN THE CLAIMS:

Please amend claims 1, 6, 11-12, and 14 as follows:

1. (Currently Amended) A synchronous signal generator converting an output which is a sine wave from a crystal oscillator of an oscillation frequency  $f$  into a pulse of a rectangular waveform by a pulse converter,

wherein the output which is a sine wave from the crystal oscillator is passed through a crystal filter equal to an AT-cut crystal piece in cutting angle, equal to the crystal oscillator in a frequency-temperature characteristic indicating a curve having an inflection point around an ambient temperature, a maximum value of the frequency characteristic occurring at a temperature lower than the ambient temperature, and a minimum value of the frequency characteristic occurring at a temperature higher than the ambient temperature, and equal to the oscillation frequency  $f$  in center frequency  $f_0$ , and is input into the pulse converter, and output as a pulse with the jitter reduced.

2. (Original) The synchronous signal generator according to claim 1, wherein said filter is a crystal filter equal to the crystal oscillator in frequency-temperature characteristic.

3. (Original) The synchronous signal generator according to claim 2, wherein respective crystal pieces used for the crystal oscillator and the crystal filter have an equal cutting angle.

4. (Original) The synchronous signal generator according to claim 1, wherein said oscillation frequency  $f$  is equal to a frequency of a fundamental wave component output from the crystal oscillator.

5. (Original) The synchronous signal generator according to claim 1, wherein said pulse converter is a complementary output driver IC.

6. (Currently Amended) A synchronous signal generator, comprising:

a crystal oscillator unit oscillating an output signal having an oscillation frequency  $f$ ;

a crystal filter unit equal to an AT-cut crystal piece in cutting angle and also equal to the crystal oscillator unit in a frequency-temperature characteristic indicating a curve having an inflection point around an ambient temperature, a maximum value of the frequency characteristic occurring at a temperature lower than the ambient temperature, and a minimum value of the frequency characteristic occurring at a temperature higher than the ambient temperature, the crystal filter unit converting an output signal from the crystal oscillator unit into a signal close to an ideal sine wave having the oscillation frequency  $f$  with the jitter reduced, and outputting the converted signal; and

a pulse conversion unit outputting a pulse of a rectangular waveform based on output of said filter unit.

7. (Original) The synchronous signal generator according to claim 6, wherein said filter unit converts the signal such that a level of specific frequency component in the output signal from said crystal oscillator unit can be relatively higher than levels of other frequency components, and outputs a resultant signal.

8. (Original) The synchronous signal generator according to claim 7, wherein said filter unit is a band pass filter having an oscillation frequency of said synchronous signal generator as a center frequency.

9. (Original) The synchronous signal generator according to claim 6 wherein said filter unit is equal to said crystal oscillator unit in frequency-temperature characteristic.

10. (Original) The synchronous signal generator according to claim 9 wherein said filter unit is formed by a crystal filter equal to said crystal oscillator unit in cutting angle of crystal piece.

11. (Currently Amended) A synchronous signal generator, comprising:

crystal oscillator means for oscillating an output signal having an oscillation frequency of  $f$ ;

crystal filter means equal to an AT-cut crystal piece in cutting angle and also equal to the crystal oscillator means in a frequency-temperature characteristic indicating a curve having an inflection point around an ambient temperature, a maximum value of the frequency characteristic occurring at a temperature lower than the ambient temperature, and a minimum value of the frequency characteristic occurring at a temperature higher than the ambient temperature, the crystal filter means for converting an output signal from the crystal oscillator means into a signal close to an ideal sine wave having the oscillation frequency  $f$  with the jitter reduced, and for outputting the converted signal; and

pulse conversion means for outputting a pulse of a rectangular waveform based on output of said filter means.

12. (Currently Amended) A synchronous signal generating method obtaining a synchronous signal from output of crystal oscillator unit oscillating an output signal having an oscillation frequency  $f$ , comprising:

converting an output signal close to an ideal sine wave having the oscillation frequency  $f$  with the jitter reduced by passing the output signal through a crystal filter equal to an AT-cut crystal piece in a cutting angle and also equal to the crystal oscillator unit in a frequency-temperature characteristic indicating a curve having an inflection point around an ambient temperature, a maximum value of the frequency characteristic occurring at a temperature lower than the ambient temperature, and a

minimum value of the frequency characteristic occurring at a temperature higher than the ambient temperature; and

converting the converted signal into a pulse signal of a rectangular waveform.

13. (Previously Presented) The synchronous signal generator according to claim 1, wherein a circuit of said filter has a center frequency equal to an initial basic frequency of the crystal of said crystal oscillator.

14. (Currently Amended) A synchronous signal generator converting an output which is a sine wave from a crystal oscillator of an oscillation frequency  $f$  into a pulse of a rectangular waveform by a pulse converter,

wherein the output which is a sine wave from the crystal oscillator is passed through a crystal filter equal to an AT-cut crystal piece in cutting angle, equal to the oscillation frequency  $f$  in center frequency  $f_0$ , and equal to the crystal oscillator in frequency-temperature characteristic indicating a curve having an inflection point around the ambient temperature, a maximum value ~~on the low temperature side~~of the frequency characteristic occurring at a temperature lower than the ambient temperature, and a minimum value ~~on the high temperature side~~of the frequency characteristic occurring at a temperature higher than the ambient temperature, ~~and is a filter output being input into the pulse converter, and~~to output a pulse with the jitter reduced.